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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/020,572	12/12/2001	Roland E. Williams	P-2183/ZI0105	5712

7590 09/26/2003

LAW OFFICES OF JAMES D. IVEY
3025 Totterdell Street
Oakland, CA 94611-1742

EXAMINER

LIANG, REGINA

ART UNIT	PAPER NUMBER
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2674

DATE MAILED: 09/26/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/020,572

Applicant(s)

WILLIAMS, ROLAND E.

Examiner

Regina Liang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Lin et al (US. PAT. NO. 5,528,235 hereinafter Lin).

As to claims 1-3, Figs. 1-5 of Lin discloses a numeric keypad comprising an arrangement of two or more numeric data entry keys, each of which includes a multidirectional switch, and each key includes a central switch, an up switch, a down switch, a left switch and a right switch.

As to claim 4, Fig. 3-5 of Lin discloses each multidirectional switch comprising a fixed electrode (42D) and a contact switch electrode (40D).

As to claims 5, 6, Lin teaches each multidirectional switch including contact electrodes, which reads on a pressure-sensitive semiconductor material or a pressure-sensitive resistive element as claimed.

As to claims 7, 9, 10, Figs. 1-5 of Lin discloses two or more symbols are associated with each of the keys and further wherein disambiguation between the two or more symbols

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associated with a pressed one of the keys is accomplished by detecting a manner in which the pressed key is pressed.

As to claims 8, 11, Fig. 4 of Lin shows the key is pressed as detected includes tilted (rocking) of the key while in a pressed state.

3. Claims 1-3, 7, 9, 10, 12-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Hirshberg (US. PAT. NO. 6,597,345).

As to claims 1-3, Figs. 1, 2, 9, 10 of Hirshberg discloses a numeric keypad comprising an arrangement of two or more numeric data entry keys, each of which includes a multidirectional switch, and each key includes a central switch (see Figs. 9, 10), an up switch, a down switch, a left switch and a right switch.

As to claims 7, 9, 10, Figs. 1, 2a, 3a, 9, 10a of Hirshberg discloses two or more symbols are associated with each of the keys and further wherein disambiguation between the two or more symbols associated with a pressed one of the keys is accomplished by detecting a manner in which the pressed key is pressed.

As to claims 12-14, Hirshberg teaches the key is a virtual key realized in a touch-sensitive screen, and the second type of actuation is a sliding along the touch-sensitive device.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirshberg in view of Eachus et al (US. PAT. NO. 4,055,735 hereinafter Eachus).

Hirshberg does not disclose each switch comprising a pressure-sensitive semiconductor material or a pressure-sensitive resistive element. However, Hirshberg teaches each key switch is in a touch-sensitive device. Eachus teaches touch-sensitive device comprising a pressure-sensitive semiconductor material or a pressure-sensitive resistive element (see col. 1, lines 5-41). Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the key switch of Hirshberg comprising a pressure-sensitive semiconductor material or a pressure-sensitive resistive element as taught by Eachus so as to provide a touch sensitive device having a plurality of individual touch sensitive locations wherein each variable resistance path defines a touch sensitive location which becomes highly conductive when the local portion of pressure sensitive variable resistance material is depressed.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


Strauch et al (US. PAT. NO. 5,861,823), Yu et al (US. PAT. NO. 5,852,414), Guyot-Sionnest (US. PAT. NO. 5,087,910), Ojima (US. PAT. NO. 4,029,915).

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Regina Liang whose telephone number is (703) 305-4719. The examiner can normally be reached on Monday-Friday from 9AM to 5:00PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe, can be reached on (703) 305-4709. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.


REGINA LIANG
PRIMARY EXAMINER
ART UNIT 2674

RL
9/21/03